

CLAIMS

What is claimed is:

1. A computer-readable medium having computer-executable instructions for performing steps for processing Input/Output (“I/O”) requests, comprising:

receiving an I/O request from an application thread;

performing an I/O operation in response to the I/O request; and

upon completion of the I/O operation, determining whether to boost a priority of the application thread according to criteria based on a status of I/O operations performed for the application thread.

2. A computer-readable medium as in claim 1, having further computer-executable instructions for performing steps of:

if the step of determining determines not to boost the priority of the application thread, performing a further I/O operation for the application thread, and determining again whether to boost the priority of the application thread.

3. A computer-readable medium as in claim 1, wherein the application thread posts a data buffer in connection with the I/O request, and the step of performing the I/O operation includes copying data into the I/O buffer.

4. A computer-readable medium as in claim 1, having further computer-executable instructions for performing the step of boosting the priority of the application thread when the step of determining determines that the priority of the application is to be boosted.

5. A computer-readable medium as in claim 4, wherein the step of boosting boosts the priority of the application thread by a pre-selected level.

6. A computer-readable medium as in claim 5, wherein the pre-selected level is fixed.

7. A computer-readable medium as in claim 1, wherein the criteria for determining whether to boost the priority of the application thread include whether there are more I/O operations to be performed for the application thread.

8. A computer-readable medium as in claim 1, wherein the criteria for determining whether to boost the priority of the application thread include whether a number of I/O operations performed in a current thread context for the application thread has reached a threshold number.

9. A computer-readable medium as in claim 1, wherein the criteria for determining whether to boost the priority of the application thread include whether a period of time since a last time the priority of the application thread was boosted has reached a threshold length.

10. A method of processing Input/Output (“I/O”) requests, comprising:

receiving an I/O request from an application thread;
performing an I/O operation in response to the I/O request; and
upon completion of the I/O operation, determining whether to boost a priority of the application thread according to criteria based on a status of I/O operations performed for the application thread.

11. A method as in claim 10, having further steps of:

if the step of determining determines not to boost the priority of the application thread, performing a further I/O operation for the application thread, and determining again whether to boost the priority of the application thread.

12. A method as in claim 10, wherein the application thread posts a data buffer in connection with the I/O request, and the step of performing the I/O operation includes copying data into the I/O buffer.

13. A method as in claim 10, having a further step of boosting the priority of the application thread when the step of determining determines that the priority of the application is to be boosted.

14. A method as in claim 13, wherein the step of boosting boosts the priority of the application thread by a pre-selected level.

15. A method as in claim 14, wherein the pre-selected level is fixed.

16. A method as in claim 10, wherein the criteria for determining whether to boost the priority of the application thread include whether there are more I/O operations to be performed for the application thread.

17. A method as in claim 10, wherein the criteria for determining whether to boost the priority of the application thread include whether a number of I/O operations performed in a current thread context has reached a threshold number.

18. A method as in claim 1, wherein the criteria for determining whether to boost the priority of the application thread include whether a period of time since a last time the priority of the application thread was boosted has reached a threshold length.

19. A computer system comprising:
an application thread making an I/O request;
a system thread for responding to the I/O request, the system thread being programmed to receive the I/O request from the application thread, perform an I/O operation in response to the I/O request, and upon completion of the I/O operation, determine whether to boost a priority of the application thread according to criteria based on a status of I/O operations performed for the application thread.

20. A computer system as in claim 19, wherein the system thread is further programmed to perform steps of:

if the system thread determines not to boost the priority of the application thread, performing a further I/O operation for the application thread, and determining again whether to boost the priority of the application thread.

21. A computer system as in claim 19, wherein the application thread posts a data buffer in connection with the I/O request, and the I/O operation performed by the system thread includes copying data into the I/O buffer.

22. A computer system as in claim 19, wherein the system thread is programmed to boost the priority of the application thread by a pre-selected level when the system thread determines that the priority of the application is to be boosted.

23. A computer system as in claim 22, wherein the pre-selected level is fixed.

24. A computer system as in claim 19, wherein the criteria for determining whether to boost the priority of the application thread include whether there are more I/O operations to be performed for the application thread.

25. A computer system as in claim 19, wherein the criteria for determining whether to boost the priority of the application thread include whether a number of I/O operations performed in a current thread context for the application thread has reached a threshold number.

26. A computer system as in claim 19, wherein the criteria for determining whether to boost the priority of the application thread include whether a period of time since a last time the priority of the application thread was boosted has reached a threshold length.